





No single component of the extrusion production process should be examined or evaluated individually.

Each interacts with at least one other complementary element of the process. If the interacting elements are equally efficient, they will reinforce and enhance the function of each other.

Only if the entire production process is considered as an integrated system, with all parts operating together in common cause, can maximum efficiency be approached

All Castool products promote energy conservation and are environmentally friendly.



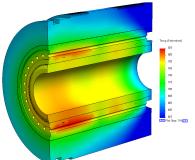




# BETTER PROFILES FASTER

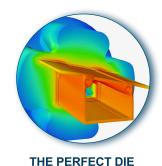


## **PROGRAMMING**





### **OPTIMIZATION**



requires the die and liner temperature to be stable from the first to the last billet.



# CERTIFICATE





## CERTIFICATE OF REGISTRATION

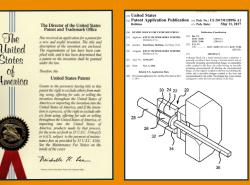


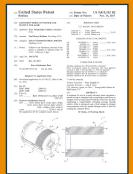
## **MATERIALS**

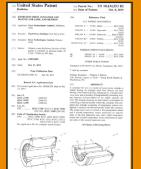
| ALLOY        | Working<br>hardness<br>(HRC) | Hot<br>strength | Toughness | Hot wear resistance | Thermal<br>Conductivity<br>(W/mk) | Cost |
|--------------|------------------------------|-----------------|-----------|---------------------|-----------------------------------|------|
| Con-Duct     | 34-38                        | •               | •••••     | •                   | ••••                              | 0    |
| L6 (1.2714)  | 38-42                        | •1              | •••       | •1                  | •••                               | 0    |
| H11 (1.2343) | 38-52                        | ••              | ••1       | ••                  | ••                                | •    |
| H13 (1.2344) | 38-52                        | ••1             | ••1       | ••1                 | ••                                | •    |
| E40K         | 42-52                        | •••             | •••1      | •••                 | ••1                               | ••   |
| Tuff Temper  | 42-52                        | •••1            | ••        | ••••                | ••1                               | ••   |
| Q10          | 42-52                        | •••             | •••       | •••                 | ••1                               | ••   |
| DAC3         | 42-52                        | •••             | •••       | •••                 | ••1                               | ••   |

## MANY OF CASTOOL PRODUCTS AND PROCESSES ARE PATENTED

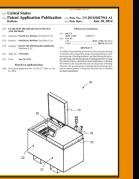








| itent  | (10) Patent No.1 US 10,434,553 B2<br>(15) Date of Patenti Oct. 8, 2019   | 02 United States Patent<br>Robbins   | (10) Patent No.: US 9,975,27.<br>(10) Date of Patent: May 22,   |
|--|--|--|---|
| NER AND<br>SETHOO                                    | (N) Reference Cled U.S. PATENT DOCUMENTS   | (54) EXTRINION DIE PRE-HEATING DEVICE<br>AND METHOD  | (56) References Cloud U.S. PATRICT DOCUMENTS  |
| lesited, Markhara                                    | 3,942,96 A * 35962 Maller  | (71) Applicant Paul Boury Rubbins, Part Party (CA)   | 4,854,949 St. 42003 State et al.<br>7,951,365 St. 12003 Schools<br>2014627634 At. 12001 Mellow 1992   |
| Port Pury (CA)                                       | AMERICA A. * HUSBY Debreedy BOX CHARGE<br>MARKET   | (2) Investor: Paul Houry Robbins, Part Perry (CA) (2) Assigner: EXCO TECENOLOGIES LIMITED, Mathem (CA)                       | 203908700 AJ * 2003 Robe 826  |
| ited, Ontario  | 7,94,619 K2 * 90009 Russes   | (*) Notice: Subjectice any disclaimer, the term of this seatest is extend or advanted under 25                               | FOREIGN PATENT DOCUMENTS  |
| , the term of this<br>Sorted under 33<br>en.         | FOREIGN ENTENT DOCUMENTS  DE GOETH ALL 9794  | U.S.C. 1540) by 827 days.  | EP 084720 A1 4/1946<br>IP 5040/NH A 21468<br>AP 206751946 A 32367   |
|  | EF 042751 A3 - 4790  | (21) Appl. No.: 139(2),894   | OTHER PUBLICATIONS  |
|  | OTHER PUBLICATIONS   | (22) Flint Jun. 36, 3613   | Plac M et al, "New Asing Zer Drawme<br>Strapproperhituges" Unformichel, Miccolark   |
|  | Transaction of EP 0451951 AT, Phonix Transactions, Mar. 2015.*   | (15) Prior Publication Data  | DE; vol. 34, No. 1; Mar. 1, 200; p. 20, 25, 391009-011<br>0100-2107; p. 2.  |
| in .   | * sited by examiner  | US 2014/0027941 A1 Am. 30, 2014  | * cited by marriar  |
| 806  | Primary Examiner — Prodesp C Burnits<br>(34) Astroney, Agenc, or Fron — Young Busile Baskes &<br>MacEntone, F.C.   | Robiol U.S. Application Data (10) Provisional application No. 61092,677, find on Jun.  | Prinary Examiner — Rebot J Gran<br>(20) Adorney Agent, or Firm — Young Basile He<br>MacFarlane, P.C.  |
| Nation<br>2019, Ellevi era Chris                     | (17) ABSTRACT  | 21, 2012   | (5) ABSTRACT  |
| 00); #030° 2982<br>*3589 (2013.01)<br>60; #230° 2964 | A consider for sen in a most certainin pous siculation as<br>materil having an elimpia set all the efforts, the three<br>hability is first transverse acts orthogonal to a second reser-<br>tion of the elimpia set of the elimpia set of the elimpia<br>generates associated by the season's algorithm to<br>here. The bending elements are included, sussentiable for<br>controlling is element pointly when the containes. The own-<br>correction of the elimpia pointly within the consisten-<br>tion of the elimpia set of the elimpia set of the elimpia set of<br>largered to receive the ferming pointly within the consisten-<br>tial waveful reservoirs include a fact interporarie vascue<br>and a received the elimpia set of the elimpia set of<br>the elimpia set of the elimpia set of the elimpia set of<br>the elimpia set of the elimpia set of the elimpia set of<br>the elimpia set of the elimpia set of the elimpia set of<br>the elimpia set of the elimpia set of the elimpia set of<br>the elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the elimpia set of the<br>elimpia set of the elimpia set of the elimpia set of the elimpia set | OB Bec Ch.  ### CAMPAC CAMPACT  #### CAMPACT  #### CAMPACT  #### CAMPACT  ##### CAMPACT  ################################### | A method of gen-handing an extraction for comprises as necession-facing a few groups of housing circum an extraction-facing in a few group of housing circum activation die unitsq over the first group of healing a being only to the first group of healing the contraction die to a distinct of healing the extraction die to a distinct of the contraction die to the contraction of the contraction |
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| 1  |  | - [5   |   |



# **EXTRUSION**







# CONTAINERS, RELINES AND CONTROL PANELS



QR, QRC, QRX
Optional air and water control
for increased productivity

3-PIECE FOR ADDED STRENGTH





# SHEAR BLADES

ALLOY AND PROFILE SPECIFIC



DELTA



SCOOP



2-Piece SCOOP



KNIFE

# D ASTOCIALLY

CONTROLLERS,
APPLICATORS AND LUBRICANTS

ALU-JECT

**LUBRICATION** 



OL ASE



STICK, LIQUID





H-13 (1.2344) and Tuff Temper



HPR High Pressure Ring



Marathon

for high pressure

**BAYONET STEMS** 

COLD CLEAN OUT BLOCKS







